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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,210	01/20/2006	Benjamin Elias	22409-00312-US	9182

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KILPATRICK STOCKTON LLP
1100 Peachtree Street
Suite 2800
ATLANTA, GA 30309

EXAMINER

PHAM, EMILY P

ART UNIT	PAPER NUMBER
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2838

NOTIFICATION DATE	DELIVERY MODE
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09/17/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/565,210	Applicant(s) ELIAS ET AL.	
	Examiner Emily Pham	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-13, 15, 17, 19-20, 22-24, 30-33, & 39-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 20, 23, 24, 30-33, 39, 40, 47, 48 and 52-56 is/are rejected.
- 7) ☒ Claim(s) 13, 15, 17, 19, 22, 41-46, 49-51 and 57-59 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/02/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Amendment filed on 7/02/2010.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 8/02/2010 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12, 20, 47, 48, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meadows et al (USP 6,553,263) in view of Canny et al (USP 5,994,876).

Regarding independent claim 12: Meadows et al (**For example: see FIG 3; Detailed Description of the Invention**) discloses a system for operating a rechargeable battery, said system comprising:
means (**182**) for charging said rechargeable battery to a predetermined maximum voltage (**For example: see line 53 of col. 20 – line 14 of col. 21**);

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means **(160)** for determining a first dynamic charging range **(For example: see line 53 of col. 20 – line 14 of col. 21)** for the rechargeable battery for a first dynamic charging range for a first plurality of charging cycles.

Meadows et al fails to disclose means for calculating an offset error for said determining means while there is no more than a relatively low load on the rechargeable battery.

However, Canny et al **(For example: see claim 19)** teaches means **(processor)** for calculating an offset error **(offset induced error)** for said determining means **(measurement circuit)** while there is no more than a relatively low load on the rechargeable battery **(rechargeable battery)** **(For example: see lines 60-64 of col. 4 and claim 19; zero current flowing through the sense resistor when there is low load or no load on the battery)**. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Meadows et al to include means for calculating an offset error for said determining means while there is no more than a relatively low load on the rechargeable battery by Canny et al for the purpose of improving the accuracy with which the measurement of the flow current from the battery is determined **(Abstract)**.

Additionally, since Meadows et al and Canny et al are both from the same field of endeavor, the purpose disclosed by Canny et al would have been recognized in the pertinent art of Meadows et al.

Regarding claim 20: Meadows et al **(For example: see FIG 9)** discloses predetermined maximum voltage may be dynamically adjusted based on parameters of

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said rechargeable battery **(277)** **(predetermined maximum voltage may be dynamically adjusted by adjusting current pulses in convenient increments).**

Regarding independent claim 47: Meadows et al **(For example: see FIG 9)** discloses a battery charger **(208)** for a rechargeable battery **(277)** of an electronic device, the battery charger **(208)** comprising:
a charge controller **(696)** configured to charge the rechargeable battery during a first cycle; and a measuring circuit **(698)** configured to measure one or more parametric data **(measure charge current)** during the first cycle **(charge cycle),**

Meadows et al fails to disclose a measuring circuit configured to calculate an offset error of the measuring circuit while no more than a relatively low load is placed on the rechargeable battery.

However, Canny et al **(For example: see claim 19)** teaches a measuring circuit configured to calculate an offset error **(measurement circuit is configured to operate with processor that executes a program to control measurement circuit to calculate offset induced error)** of the measuring circuit **(measurement circuit)** while no more than a relatively low load is placed on the rechargeable battery **(rechargeable battery)** **(For example: see lines 60-64 of col. 4 and claim 19; zero current flowing through the sense resistor when there is low load or no load on the battery).** It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Meadows et al to include measuring circuit configured to calculate an offset error of the measuring circuit while no more than a relatively low load is placed on the rechargeable battery by Canny et al for

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the purpose of improving the accuracy with which the measurement of the flow current from the battery is determined (**Abstract**).

Additionally, since Meadows et al and Canny et al are both from the same field of endeavor, the purpose disclosed by Canny et al would have been recognized in the pertinent art of Meadows et al.

Regarding claim 48: Meadows et al (**For example: see FIG 9**) discloses an auxiliary power source (**AC Power**) configured to power the electronic device independently of the rechargeable battery (**277**), and configured to power the measuring circuit (**698**) independently of the rechargeable battery (**277**).

Regarding claim 55: Meadows et al (**For example: see FIG 9**) discloses parametric data (**selected data including battery status data**) includes a cumulative amount of charge (**For example: see lines 58-63 of col. 10: the power circuits control the charging operation so that only energy that is needed is allowed to charge the battery, thereby preventing overcharging from occurring**) delivered to the rechargeable battery (**277**) during the first cycle (**charge cycle**).

Regarding claim 56: Meadows et al (**For example: see FIG 9**) discloses the means (**166, 168**) for calculating the offset error calculates the offset error (**trickle charge**) for said determined means (**160**) while there is no load (**zero voltage**) on the rechargeable battery (**277**) (**zero-volt technology**).

5. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meadows et al (USP 6,553,263) in view of Canny et al (USP 5,994,876) and further in view of Single (USP 6,922,591).

Regarding claims 23-24: Meadows et al discloses the claimed invention except for said rechargeable battery is used for an implantable medical device which is a receiver/stimulator unit of totally implantable prosthetic hearing implant.

However, Single (**For example: see FIG 1, FIG 2, Abstract**) teaches rechargeable battery (**power supply 43**) is used for an implantable medical device which is a receiver/stimulator unit of totally implantable prosthetic hearing implant (**receiver and stimulator unit 32 of implantable prosthetic hearing implant**). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Meadows et al to include the implantable medical device as a receiver/stimulator unit of prosthetic hearing implant system by Single for the purpose of providing reliable and safe power source to the implantable medical device (**line 27-35 of col. 4**).

Additionally, since Meadows et al and Single are both from the same field of endeavor, the purpose disclosed by Single would have been recognized in the pertinent art of Meadows et al.

6. Claims 39, 31, and 40 are rejected under 35 U.S.C. 103(a) as being anticipated by Munshi et al (USP 5,411,537) in view of Canny et al (USP 5,994,876).

Regarding independent claim 39: Munshi et al (**For example: see FIG 2**) discloses a battery charger for a rechargeable battery (**rechargeable lithium battery 92**) of an electronic device, the battery charger comprising:
a charge controller (**88**) configured to charge the rechargeable battery during a cycle

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(charge cycle); and a measuring circuit **(90)** configured to measure parametric data **(current level, voltage level)** during the cycle **(charge cycle)**.

Munshi et al fails to disclose a measuring circuit configured to calculate an offset error of the measuring circuit while no load is placed on the rechargeable battery.

However, Canny et al **(For example: see claim 19)** teaches a measuring circuit configured **(measurement circuit is configured to operate with processor that executes a program to control measurement circuit to calculate offset induced error)** to calculate an offset error **(offset induced error)** of the measuring circuit **(measurement circuit)** while no load is placed on the rechargeable battery **(rechargeable battery) (For example: see lines 60-64 of col. 4 and claim 19; zero current flowing through the sense resistor when there is low load or no load on the battery)**. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Meadows et al to include a measuring circuit configured to calculate an offset error of the measuring circuit while no load is placed on the rechargeable battery by Canny et al for the purpose of improving the accuracy with which the measurement of the flow current from the battery is determined **(Abstract)**.

Additionally, since Munshi et al and Canny et al are both from the same field of endeavor, the purpose disclosed by Canny et al would have been recognized in the pertinent art of Munshi et al.

Regarding claim 31: Munshi et al (**For example: see FIG 2**) discloses parametric data (**current level, voltage level**) includes a cumulative amount of charge delivered to the rechargeable battery (**rechargeable lithium battery 92**) during the first cycle (**charge cycle**).

Regarding claim 40: Munshi et al (**For example: see FIG 2**) discloses an auxiliary power source (**68**) configured to power the electronic device independently of the rechargeable battery (**rechargeable lithium battery 92**), and configured to power the measuring circuit (**90**) independently of the rechargeable battery (**rechargeable lithium battery 92**).

7. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munshi et al (USP 5,411,537) in view of Canny et al (USP 5,994,876) and further in view of Hwang (USP 6,049,210).

Regarding claim 30: Munshi et al fails to disclose measuring circuit is further configured to compensate for the calculated offset error of the measuring circuit.

However, Hwang (**For example: see FIG 1, FIG 2, lines 25-42 of col. 4**) teaches measuring circuit (**100**) is further configured to compensate for the calculated offset error of the measuring circuit (**lines 25-42 of col. 4**). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the battery charger of Munshi et al to include the measuring circuit configured to compensate for any offset error of the measuring device by Hwang et al for the purpose of accurately monitoring the state of charge of the rechargeable battery (**Abstract**).

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Additionally, since Munshi et al and Hwang are both from the same field of endeavor (**battery charging**), the purpose disclosed by Hwang would have been recognized in the pertinent art of Munshi et al.

8. Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munshi et al (USP 5,411,537) in view of Canny et al (USP 5,994,876) and further in view of Single (USP 6,922,591).

Regarding claims 32-33: Munshi et al discloses the claimed invention except for said electronic device is an implantable medical device which is a receiver/stimulator unit of prosthetic hearing implant system.

However, Single (**For example: see FIG 1, FIG 2, Abstract**) teaches an implantable medical device which is a receiver/stimulator unit (**receiver and stimulator unit 32**) of prosthetic hearing implant system using battery (**power supply 43**). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Munshi et al to include the implantable medical device as a receiver/stimulator unit of prosthetic hearing implant system by Single for the purpose of providing reliable and safe power source to the implantable medical device (**line 27-35 of col. 4**).

Additionally, since Munshi et al and Single are both from the same field of endeavor, the purpose disclosed by Single would have been recognized in the pertinent art of Munshi et al.

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9. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meadows et al (USP 6,553,263) in view of Canny et al (USP 5,994,876) and further in view of Hwang (USP 6,049,210).

Regarding claim 52: Meadows et al fails to disclose measuring circuit is further configured to compensate for the calculated offset error of the measuring circuit.

However, Hwang (**For example: see FIG 1, FIG 2, lines 25-42 of col. 4**) teaches measuring circuit **(100)** is further configured to compensate for any offset error of the measuring device **(lines 25-42 of col. 4)**. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the battery charger of Meadows et al to include the measuring circuit configured to compensate for the calculated offset error of the measuring circuit by Hwang et al for the purpose of accurately monitoring the state of charge of the rechargeable battery **(Hwang: abstract)**.

Additionally, since Munshi et al and Hwang are both from the same field of endeavor **(battery charging)**, the purpose disclosed by Hwang would have been recognized in the pertinent art of Munshi et al.

10. Claims 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meadows et al (USP 6,553,263) in view of Canny et al (USP 5,994,876) and further in view of Single (USP 6,922,591).

Regarding claims 53-54: Meadows et al discloses the claimed invention except for said electronic device is an implantable medical device which is a receiver/stimulator unit of prosthetic hearing implant system.

However, Single (**For example: see FIG 1, FIG 2, Abstract**) teaches an implantable medical device which is a receiver/stimulator unit (**receiver and stimulator unit 32**) of prosthetic hearing implant system using battery (**power supply 43**). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the electronic device of Meadows et al to include the implantable medical device as a receiver/stimulator unit of prosthetic hearing implant system by Single for the purpose of providing reliable and safe power source to the implantable medical device (**line 27-35 of col. 4**).

Additionally, since Meadows et al and Single are both from the same field of endeavor, the purpose disclosed by Single would have been recognized in the pertinent art of Meadows et al.

Allowable Subject Matter

11. Claims 13,15, 17, 19, 22, 41-46, 49-51, and 57-59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

13. Applicant's arguments with respect to claims 12, 39, and 47 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Pham whose telephone number is (571)270-3046. The examiner can normally be reached on Mon-Thu (7:00AM - 6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Lewis can be reached on (571) 272 - 1838. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monica Lewis/ Supervisory Patent Examiner, Art Unit 2838	
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September 11, 2010

/EP/
Examiner, Art Unit 2838

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